

WASHINGTON BALLAST WATER

UNITED STATES SHIPPING LLC

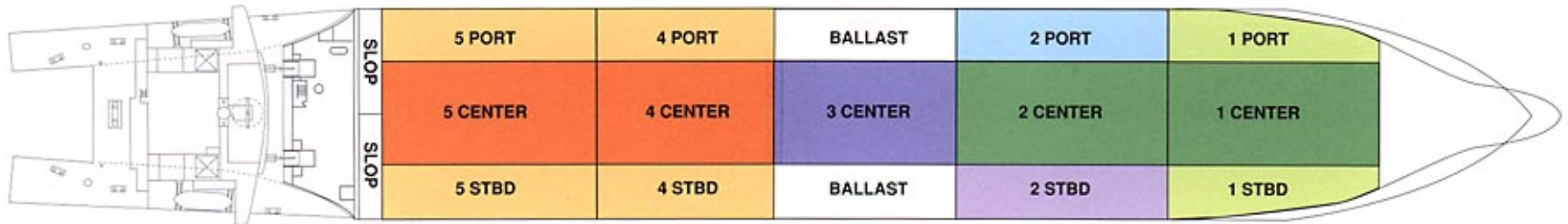
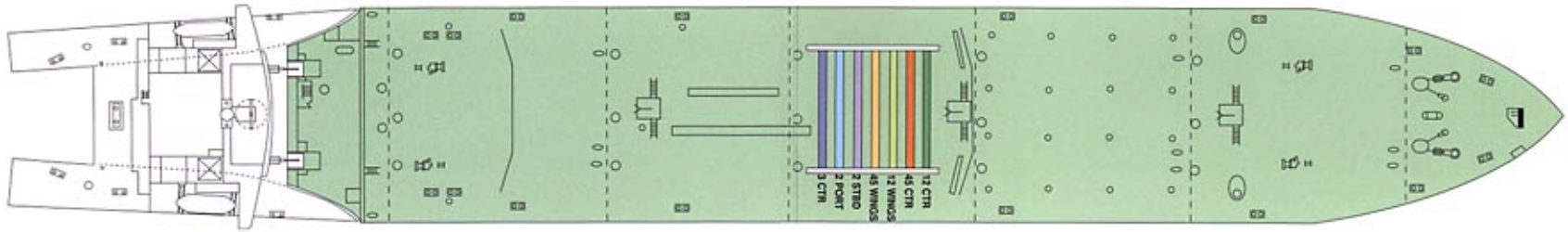
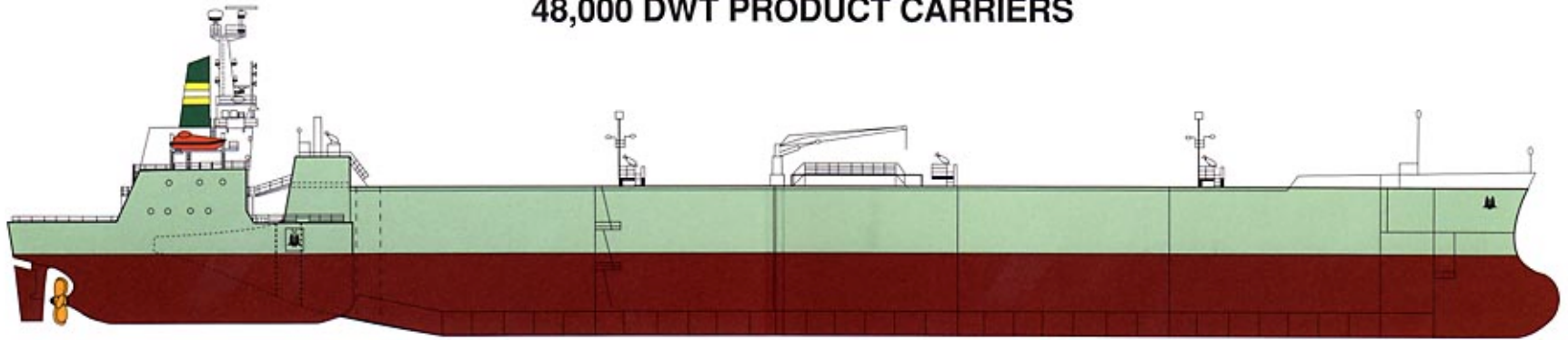
MAY 12, 2003

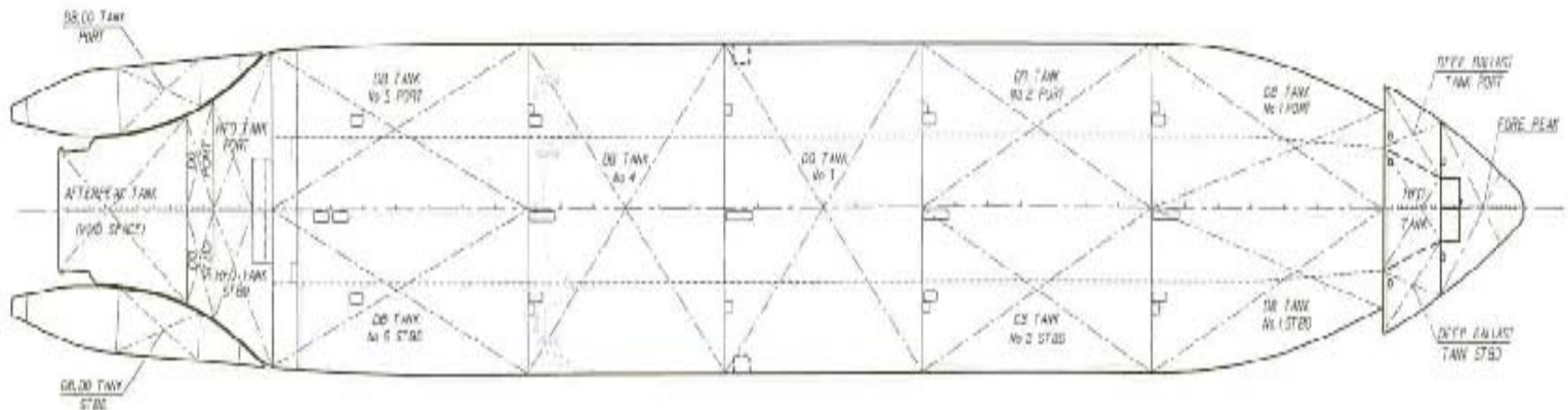




UNITED STATES SHIPPING LLC

48,000 DWT PRODUCT CARRIERS





| TYPE | TANK IDENTIFICATION | FRAME LOCATION | CAPACITY | |
|---------|---------------------|----------------|------------------------------|-----------------------|
| | | | BBLs (42 gallons/bbls) | TONS (LT=2240 lbs) |
| BALLAST | FORE PEAK | 18-FWD | 8,846 | 1,416.81 |
| | DEEP TANK PORT | 18-30 | 2,505 | 401.21 |
| | DEEP TANK STBD | 18-30 | 2,505 | 401.21 |
| | NO 1 D.B. PORT | 30-37 | 4,899 | 7,847.86 |
| | NO 1 D.B. STBD | 30-37 | 4,899 | 7,847.86 |
| | NO 2 D.B. PORT | 37-44 | 6,103 | 977.48 |
| | NO 2 D.B. STBD | 37-44 | 6,103 | 977.48 |
| | NO 3 D.B. | 40-50 | 10,495 | 1,680.92 |
| | NO 3 WING PORT | 40-50 | 20,759 | 3,324.84 |
| | NO 3 WING STBD | 40-50 | 20,759 | 3,324.84 |
| | NO 4 D.B. | 50-56 | 10,495 | 1,680.92 |
| | NO 5 D.B. PORT | 56-63 | 6,677 | 1,069.41 |
| | NO 5 D.B. STBD | 56-63 | 6,677 | 1,069.41 |
| | AFT PEAK | 81-TRANS. | 6,647 | 1,064.61 |
| TOTAL | | | 118,369 | 33,084.86 |

VESSEL CHALLENGES

- Safety
 - Ballast system design vs. new practices
 - Maintaining Trim, List, and Stress on hull at acceptable limits
- Exchange vs. Flow-through methods
 - Stress component of Flow-through
- Environmental & Operational Considerations
 - Weather, Time & Cargo load conditions
- Wear & Tear on ballast equipment
 - Double to greater than 4 times normal operations depending upon method employed: Exchange or Flow-through
 - Increase in equipment maintenance

ALTERNATIVES

- Treatment technology being tested provides alternates to vessel exchange & flow-through challenges.
- Alternatives present their own set of challenges
 - Compliance with International Standards
 - Available space on vessel vs. size of equipment employed
 - Scope of work required to retrofit equipment
- United States Shipping is in the process of voluntary testing, biocide technology for effectiveness

CONCERNS

- Vessels operate on the West, Gulf & East Coasts and between coasts – International
 - Acceptable alternative technologies need to be aligned with Federal and International standards
 - Measuring protocols for treatment effectiveness need to be aligned at Federal & International levels
- Implementation considerations
 - Timing of standards accepted by USCG & IMO
 - Financial planning for equipment purchases
 - Coordinating equipment retrofit with scheduled dry dock
 - Crew training in operation and maintenance